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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
08/950,542	10/15/1997	WILLIAM W. BACHOVCHIN	2002941-0051	9495

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EXAMINER
LUKTON, DAVID

ART UNIT	PAPER NUMBER
1653	53

DATE MAILED: 08/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No. 08/950,542	Applicant(s) BACHOVCHIN ET AL.	
	Examiner David Lukton	Art Unit 1653	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 06 May 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on *06 May 2002*. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☒ Applicant's reply has overcome the following rejection(s): *see accompanying sheets*.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *see accompanying sheets*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☐ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: *none*.

   Claim(s) objected to: *none*.

   Claim(s) rejected: *35, 36, 39-43, 46-51*.

   Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

Advisory Action

Paper No. 52 (filed 5/6/02) directs the amendment of claims 35 and 42, and the cancellation of claims 37, 38, 44, 45. Upon entry of this amendment, claims 35, 36, 39-43, 46-51 will be pending.

Applicants' arguments filed 5/6/02 have been considered and found persuasive in part. Upon entry of the amendment, the §112, second paragraph rejection will be withdrawn. In addition, the rejection of claims 35-51 as being unpatentable over each of Bachovchin (USP 4,935,493), Bachovchin (WO 89/03223) and Flentke (*Proc. Natl. Acad. Sci.* **88**, 1556, 1991) will be withdrawn. In addition, the rejection of claims 37, 38, 40, 43-45, 48-51 over Bachovchin (*J. Biol. Chem.* **265**, 3738, 1990) will be withdrawn.

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The following is a quotation of the first paragraph of 35 U.S.C. §112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 35, 36, 39-43, 46-51 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make

As indicated previously, the specification does not not enable a skilled organic chemist to obtain the requisite isomer with a purity of 96% or greater. The specification discloses two species that fall within the scope of the claimed invention: Pro-boroPro and Ala-boroPro. As disclosed on page 15, line 3+ of the specification, L-Ala-D-boroPro can be separated from L-Ala-L-boroPro by eluting with MeOH/EtOH on silica gel. On page 21, line 13+, it is stated that L-Pro-L-boroPro can be separated from L-Pro-D-boroPro by eluting the compounds on a C_{18} HPLC column using a water/acetonitrile gradient. As stated in the declaration filed 4/6/99 (paper No. 29), the conclusion that L-Ala-D-boroPro can be separated from L-Ala-L-boroPro by eluting with MeOH/EtOH on silica gel is erroneous. The reason for this erroneous conclusion is the presence of the following four different isomers, a fact which was not recognized at the time:

cis-L-Ala-D-boroPro and *trans*-L-Ala-D-boroPro

cis-L-Ala-L-boroPro and *trans*-L-Ala-L-boroPro.

According to the declaration, the spectra were misinterpreted, and the stereochemistry incorrectly assigned. This admission of misinterpretation supports a finding of non-enablement, at least insofar as the procedure is concerned regarding the separation of L-Ala-D-boroPro and L-Ala-L-boroPro. As indicated above, only Pro-boroPro and Ala-boroPro are specifically disclosed in the specification, and thus results in a finding of non-

In the response filed 5/6/02, it is argued that in order for an examiner to impose a valid enablement rejection, he must address the factors cited in *In re Wands* (8 USPQ2d 1400, Fed. Cir., 1988), i.e., the "Forman factors". However, responses of record admit non-enablement, and such an admission may be sufficient in and of itself.

In the response filed 5/6/02, it is argued (page 6 of 19) that a skilled organic chemist would have recognized that the procedure on page 15 of the specification should be avoided, because the specification discloses or implies that following this procedure would have lead to "uncertainties". However, no such disclosure of uncertainties regarding the chromatographic procedure is evident on page 15, or on any other page of the specification. One reading the specification would likely have concluded that in separating stereoisomers of Pro-boroPro, one should used a reverse phase column, but for Ala-boroPro, one should use silica gel. Given that the claimed genus is of infinite size, this leaves some question as to how one should proceed for all of the remaining compounds. But the point is that there is no directive in the specification to avoid the silica gel which, by applicants own admission, fails to enable one of skill in the art to practice the claimed invention.

The rejection is maintained.

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Claims 35, 36, 39-43, 46-51 are rejected under 35 U.S.C. 112, first paragraph, as

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As indicated previously, each of claims 35, 39 and 42 recites that the stereochemical purity of the carbon atom bearing boron exceeds 96%. In the response filed 5/6/02, it is argued (page 7 of 19) that the following passage on page 21, lines 23-24 provides the necessary support: "...achieved an isomeric purity of about 99-6% for each isomer." In the arguement, it is asserted that the skilled chemist, upon seeing the designation "99-6%" in the context of the description on page 21, would have reasoned that what was intended by this designation is a range of values, specifically 96% - 99%. A more likely interpretation of this designation, however, is that the hyphen ("-") was a typographical error, and what was intended instead was a decimal point, i.e., that the number 99.6% was intended. This interpretation is more reasonable in view of the fact that the results of a single experiment are being desribed, as opposed to the aggregate results of several experiments. Moreover, as indicated previously, in normal English usage, the lower number is presented first, i.e., 96 - 99%, rather than 99-96%. Accordingly, support is lacking both for the number 96 and for the number 99.

In the response filed 5/6/02, it is also argued that the examiner had an opportunity to impose this ground of rejection at an earlier point in the prosecution. While this may be

rejection is maintained.

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The following is a quotation of 35 USC §103 which forms the basis for all obviousness rejections set forth in the Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.
>
> This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made, absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103.

Claims 35, 36, 39, 41, 42, 46, 47 are rejected under 35 U.S.C. §103 as being unpatentable over Bachovchin (*J. Biol. Chem.* **265**, 3738, 1990).

As indicated previously, Bachovchin teaches (page 3743, col 1, pagagraph 3) acquisition of the requisite isomer, but that the purity was only 95%. If the requisite isomer can be obtained with 95% purity after only one pass through a column, an organic chemist of ordinary skill would have expected that a purity of at least 96% could be obtained after two

1990) regarding separation of isomers was incorrect. However, this argument is not consistent with the facts. The evidence "of record" does not unambiguously show this. It is, however, true that if the verbal statements made by William Bachovchin on 2/1/01 were to be entered into the record, such statements might be sufficient to overcome this ground of rejection. However, the verbal statements made by William Bachovchin on 2/1/01 are not of record. Accordingly, the rejection is maintained.

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No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lukton whose telephone number is (703) 308-3213.

An inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

D. L. 8/12/02

Christopher S.F. Low

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